

The clean copy of new claim 17 is as follows.

- 1        17. A structure for the dissipation of heat radiating through a surface area of a
- 2        component of said structure, the improvement comprising :
- 3        a planar shaped radiation to liquid first heat transfer member positioned in contact with
- 4        said surface area of said component
- 5        said planar shaped transfer member having passageways for a heat receiving liquid, and,
- 6        a second heat transfer capability operable to transfer heat in said first heat transfer member
- 7        to a gaseous medium.

Claim 3 line 1 Erase "1" and in lieu thereof insert -17-.

A clean copy of amended Claim 3 is as follows.

- 1        3. The improvement of claim 17 wherein said component in contact with said surface
- 2        area has at least one serpentine shaped passageway.

Claim 4 line 1 Erase "1" and in lieu thereof insert -3 -.

A clean copy of amended Claim 4 is as follows.

- 1        4. The improvement of claim 3 wherein said serpentine passageway is a plurality of
- 2        said passageways resulting from top and bottom plates each with a protruding
- 3        interdigitating pathway configuration.

Cancel claim 5        /

Cancel claim 6        /

Claim 7 line 1 Erase "1" and in lieu thereof insert - 4 -.

A clean copy of amended Claim 7 is as follows.

1        7. The improvement of claim 4 where said component includes an embedded pump at  
2        a site connected to said at least one serpentine pathway.

Claim 8 line 1 Erase "1" and in lieu thereof insert - 7 -.

A clean copy of amended Claim 7 is as follows.

1        8. The improvement of claim 7 where said component includes an embedded pump at  
2        site joining four serpentine pathways at a pump site.

Kindly add new claim 18 as follows then cancel claims 9 and 10. 

1        18. In the dissipation of heat through a surface area of an integrated circuit  
2        in electronic apparatus,  
3        the improvement comprising :  
4        a planar shaped transfer component positioned in contact with said surface area for transfer  
5        of said heat radiating from said surface area of said integrated circuit to a liquid medium  
6        said transfer component having passageways for said liquid medium, and,  
7        heat exchange means adapted to transfer said heat through a gaseous medium to an  
8        ambient of said electronic apparatus.

The clean copy of new claim 18 is as follows.

1 18. In the dissipation of heat through a surface area of an integrated circuit  
2 in electronic apparatus,  
3 the improvement comprising :  
4 a planar shaped transfer component positioned in contact with said surface area for transfer  
5 of said heat radiating from said surface area of said integrated circuit to a liquid medium  
6 said transfer component having passageways for said liquid medium, and,  
7 heat exchange means adapted to transfer said heat through a gaseous medium to an  
8 ambient of said electronic apparatus.

Claim 11 line 1 Erase "11" and in lieu thereof insert - 18-, and line 3 erase - and radiated heat -.

A clean copy of amended claim 11 is as follows.

1 11 The improvement of claim 18 wherein said transfer of said heat in said  
2 liquid medium to a gaseous medium includes said gaseous medium conveying said  
3 transferred heat from said apparatus to an ambient outside said apparatus.

Kindly add the following new claim 19 as follows and thereafter cancel claims 12 and 13. /

1 19. In the dissipation of heat through radiating surface areas of integrated circuits  
2 in electronic apparatus,  
3 the improvement comprising :  
4 a planar shaped transfer component for transfer of heat radiating from said radiating  
5 surface area of each of said integrated circuits to a liquid medium,  
6 said transfer component having first and second essentially parallel sides with

7 the radiating surface area of each integrated circuit of said integrated circuits  
8 being positioned in contact with one of said sides, and,  
9 a heat exchanger component adapted to transfer said heat  
10 through a gaseous medium to an ambient of said electronic apparatus.

The clean copy of new claim 19 is as follows.

1 19. In the dissipation of heat through radiating surface areas of integrated circuits  
2 in electronic apparatus,  
3 the improvement comprising :  
4 a planar shaped transfer component for transfer of heat radiating from said radiating  
5 surface area of each of said integrated circuits to a liquid medium,  
6 said transfer component having first and second essentially parallel sides with  
7 the radiating surface area of each integrated circuit of said integrated circuits  
8 being positioned in contact with one of said sides, and,  
9 a heat exchanger component adapted to transfer said heat  
10 through a gaseous medium to an ambient of said electronic apparatus.

Kindly add the following new claim 20 as follows then cancel claims 14 and 15

1 20. The process of transfer of heat in electronic apparatus from an area of densely  
2 positioned sources of heat each said source radiating through a planar surface of an  
3 element of said electronic apparatus,  
4 comprising the steps of:

5 providing a radiation to liquid heat transfer planar shaped component having first and  
6 second essentially parallel surfaces with liquid passageways between said essentially  
7 parallel surfaces positioned in contact with said radiating surface in said apparatus,  
8 and ,  
9 providing a heat exchange mechanism operable to transfer heat in the liquid in said  
10 planer shaped transfer component to a gas ambient.

The clean copy of new claim 20 is as follows.

1 20. The process of transfer of heat in electronic apparatus from an area of densely  
2 positioned sources of heat each said source radiating through a planar surface of an  
3 element of said electronic apparatus,  
4 comprising the steps of:  
5 providing a radiation to liquid heat transfer planar shaped component having first and  
6 second essentially parallel surfaces with liquid passageways between said essentially  
7 parallel surfaces positioned in contact with said radiating surface in said apparatus,  
8 and ,  
9 providing a heat exchange mechanism operable to transfer heat in the liquid in said  
10 planer shaped transfer component to a gas ambient.

Claim 16 line 1 Erase "14" and in lieu thereof insert - 20- .

A clean copy of amended claim 16 is as follows.

1 16. The process of claim 20 including in said providing, a radiation to liquid,  
2 heat transfer component, positioned in contact with said area on said surface, step,  
3 the further providing of multiple serpentine liquid passageways in said component.